

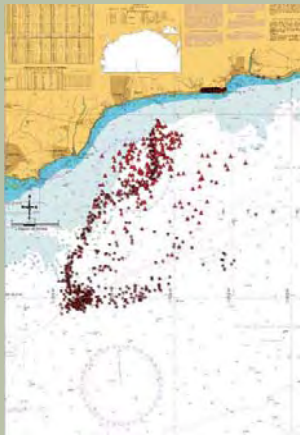
# Cefas' role in the *MSC Napoli* incident

## MSC Napoli - 18 January 2007

62,000 tonnes,  
 2,318 containers  
 1600 tonnes of dangerous chemicals,  
 4,000 tonnes of oil.

- En route from Felixstowe to Durban, RSA. Cracks develop in engine room walls, engine room floods, crew evacuated
- Whilst being towed to Portland harbour ship develops severe structural failure and is grounded in Lyme Bay, a world heritage site, popular tourist and fisheries area.
- Decision made to salvage *in-situ*.

## Cargo advice



- Modelling – movement of spilled oil and lost containers  
 Hazard Assessment of cargo using the ships manifest, a colour coded chart was created to aid salvors in recovery.
- Likely impact on fishery resources and human food chain (to Defra and FSA)
- Participated in Environment Group which advised MCA re salvage and response
- Advice provided as to the acceptability and implications of dispersant use on spilled oil

## Monitoring programme

- Water quality, PAH shellfish levels, benthic and sediment surveys, necropsies of affected sea birds, biological effects, hold water toxicities, environmental impact assessments.
- Results and explanations can be found in AEMR 61 and available from the Environment Agency National Contact Centre 08708 506506.

## References

Environmental monitoring conducted in Lyme Bay following the grounding of *MSC Napoli* in January 2007, with an assessment of impact. Science Series Aquatic Environmental Monitoring Report, Cefas Lowestoft, 61: 36pp  
 Kirby, M.F., Devoy, B., Law, R.J., Ward, A. and Aldridge, J. (2008). The use of a bioassay based approach to the hazard/risk assessment of cargo derived toxicity during shipping accidents: A case study – the *MSC Napoli*. Marine Pollution Bulletin 56, 781-786.



## Toxicity testing

Hold water was sampled and toxicity tested using an algal and crustacean species. The method provided a prompt hazard assessment process also allowing for multi-contaminant and mixture toxicity to also be properly addressed. It also provided substantial public reassurance. Showed a reduction in hold water toxicity as the salvage operation progressed, probably as a result of the removal of contaminant sources and dilution by seawater influx. Samples showed no toxicity by the time all containers were removed. Allowed for hold water to be pumped from the ship with confidence that the surrounding biota would not be affected. Full results see Kirby *et al* 2008.



Toxicity test set-up



*Skeletonema costatum*, a marine diatom



*Tisbe battagliai*, a marine copepod

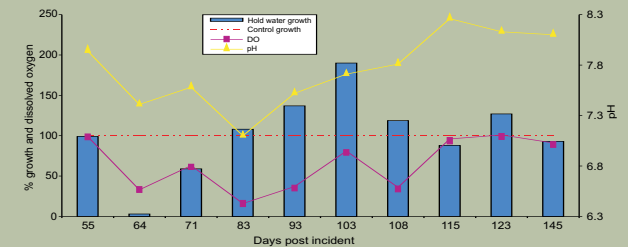


Figure 1. Growth effects on *Skeletonema costatum* and physical parameter change, over days post incident of hold water from the *MSC Napoli*

## Summary/environment impact

- Prevention of leakage of insecticides.
- Minimal oil lost in Lyme Bay (< 5% total).
- No dangerous goods containers lost, pre-salvage containers located and recovered.
- Monitoring programme showed only modest and none-persistent contamination of the water column and shell fish.
- Most birds oiled were adults and breeding populations may be affected.